

Listing of Claims

This listing of claims will replace all prior versions, and listings, of the claims in this application.

Claim 1 (currently amended): A method of identifying and correcting errors in information describing terrain features, comprising:

obtaining a first set of data describing an area of terrain, the first set of data having a first type of error;

obtaining a second set of data describing the area of terrain, the second set of data having a second type of error, wherein the second type of error is characteristically different from the first type of error;

comparing a subset of the first set of data corresponding to a first portion of the area of terrain with a subset of the second set of data corresponding to the first portion to identify information, describing a terrain feature, that is not present in one of the first and second sets of data;

replacing the subset of the first set of data with the subset of the second set of data when information describing a terrain feature is not present in the first set of data because of the first type of error; and

replacing the subset of the second set of data with the subset of the first set of data when information describing a terrain feature is not present in the second set of data because of the second type of error.

Claim 2 (original): The method of claim 1, wherein the obtaining the first set of data is accomplished using photogrammetry.

Claim 3 (original): The method of claim 2, further including:
generating an elevation model of the area using the second set of data;
rendering a synthetic display of the terrain from the elevation model; and
wherein the comparing step includes comparing the synthetic display of the terrain to a photogrammatic output of the first set of data to discover differences therebetween.

Claim 4 (original): The method of claim 3, wherein the first set of data is a photograph of the terrain taken from a known position, and wherein the step of rendering the synthetic display of the terrain includes rendering the synthetic display of the terrain from a point of view of the known position.

Claim 5 (original): The method of claim 2, wherein the first set of data comprises at least two photographs of the terrain taken at different positions, and further comprising:

- creating a first elevation model from the at least two photographs;

- orthorectifying one of the at least two photographs using the first elevation model;

- creating a second elevation model using the second set of data;

- rendering a display of the second elevation model;

- orthorectifying the display of the second elevation model using the second elevation model; and

wherein the comparing step includes comparing the orthorectified photograph with the orthorectified display of the second elevation model.

Claim 6 (original): The method of claim 2, further including:

- generating a first elevation model of the area of terrain using the first set of data;

and

- generating a second elevation model of the area of terrain using the second set of data;

wherein the comparing step includes comparing a subset of the first elevation model corresponding to the portion of the area of terrain with a subset of the second elevation model corresponding to the portion of the area of terrain.

Claim 7 (original): The method of claim 6, further including:

- generating a first topographical display of the terrain from the first elevation model; and

- generating a second topographical display of the terrain from the second elevation model;

wherein the comparing step includes comparing positions of lines of constant altitudes on the first and second topographical displays to discover differences therebetween.

Claim 8 (original): The method of claim 1, wherein the obtaining the second set of data is accomplished using active remote sensing technology.

Claim 9 (currently amended): The method of claim [[1]] 8, wherein the active remote sensing technology is one of Interferometric Synthetic Aperture Radar (IFSAR) and Light Detection and Ranging (LIDAR).

Claim 10 (currently amended): A method of identifying and correcting errors in a database containing information descriptive of terrain, the information being obtained by scanning the terrain using a remote sensing technology, the method comprising:

obtaining a data set that is descriptive of the terrain and is independent of the information in the database, wherein the data set has a characteristic error type that is different from a characteristic error type of the remote sensing technology;

comparing the data set to the information in the database; ~~and~~

identifying errors in the database by determining whether information in the database describing a terrain feature is different from information in the data set describing the terrain feature; and

replacing the information in the database describing the terrain feature with the information from data set describing the terrain feature when the difference therebetween is due to the characteristic error type of the remote sensing technology.

Claim 11 (original): The method of claim 10, wherein the data set is obtained through photogrammetry.

Claim 12 (original): The method of claim 11, further including:

generating an elevation model of the area using the information in the database;

rendering a synthetic display of the terrain from the elevation model; and

wherein the comparing step includes comparing the synthetic display of the terrain to a photogrammetric output of the data set to discover differences therebetween.

Claim 13 (original): The method of claim 12, wherein the data set is a photograph of the terrain taken from a known position, and wherein the step of rendering the synthetic display of the terrain includes rendering the synthetic display of the terrain from a point of view of the known position.

Claim 14 (original): The method of claim 11, wherein the data set comprises at least two photographs of the terrain taken at different positions, and further comprising:
creating a first elevation model from the at least two photographs;
orthorectifying one of the at least two photographs using the first elevation model;
creating a second elevation model using the information in the database;
rendering a display of the second elevation model;
orthorectifying the display of the second elevation model using the second elevation model; and

wherein the comparing step includes comparing the orthorectified photograph with the orthorectified display of the second elevation model.

Claim 15 (original): The method of claim 11, further including:
generating a first elevation model of the area of terrain using the data set; and
generating a second elevation model of the area of terrain using the information in the database;

wherein the comparing step includes comparing the first elevation model with the second elevation model.

Claim 16 (original): The method of claim 15, further including:
generating a first topographical display of the terrain from the first elevation model; and
generating a second topographical display of the terrain from the second elevation model;

wherein the comparing step includes comparing positions of lines of constant altitudes on the first and second topographical displays to discover differences therebetween.

Claim 17 (original): The method of claim 10, wherein the identifying step includes:

Identifying obstacles and terrain features in the data set that are not accurately represented in the information in the database.

Claim 18 (currently amended): A method of identifying and correcting errors in a database containing information descriptive of terrain, the information being obtained by scanning the terrain using a remote sensing technology, the method comprising:

obtaining, using photogrammetry, a data set that is descriptive of the terrain and is independent of the information in the database, wherein the data set has a characteristic error type that is different from a characteristic error type of the remote sensing technology;

comparing the data set to the information in the database; ~~and~~

identifying obstacles and terrain features in the data set that are not accurately represented in the information in the database; and

replacing the information in the database relating to the inaccurately represented obstacles and terrain features with information in the data set relating to the inaccurately represented information when the inaccurate representation is due to the characteristic error type of the remote sensing technology.

Claim 19 (original): The method of claim 18, further including:

generating a first elevation model of the area of terrain using the data set; and

generating a second elevation model of the area of terrain using the information in the database;

wherein the comparing step includes comparing the first elevation model with the second elevation model.

Claim 20 (currently amended): The method of claim 18, further including:
generating an elevation model of the area using the information in the database;
rendering a synthetic display of the terrain from the elevation model; and
wherein the comparing step includes comparing the synthetic display of the terrain to a
photogrammetric output of the data set ~~to discover differences therebetween.~~